

**GULF OF MEXICO FISHERY MANAGEMENT COUNCIL**

The Commons at Rivergate

3018 North U.S. Highway 301, Suite 1000 • Tampa, Florida 33619-2272

(813) 228-2815 • FAX (813) 225-7015

\_\_\_\_\_ E-mail: [gulfcouncil@gulfcouncil.org](mailto:gulfcouncil@gulfcouncil.org) • Web: <http://www.gulfcouncil.org>

**TAB H, NO. 5**

**DRAFT**

October 26, 2004

Dr. William Hogarth  
Director  
NOAA Fisheries  
1315 East-West Highway  
Room 14564, Bldg. SSMC3, Route F  
Silver Spring, Maryland 20910

Dear Dr. Hogarth:

With this letter, the Gulf of Mexico Fishery Management Council (Council) would like to offer the following comments on Oceana's "Rulemaking Petition to Protect Deep-Sea Coral and Sponge Habitat." The notion that deep-sea corals and communities are important habitat that should receive conservation consideration has come of age since the past two international symposia (1: Dalhousie University, Halifax, Canada, 2001 and 2: Fredrich Alexander University, Erlangen, Germany, 2003). Presentations at these symposia included multiple papers documenting habitat destruction by trawling and the need for conservation measures.

In the Gulf of Mexico, however, the Council has developed a Coral and Coral Reef Fishery Management Plan (FMP) under which the harvest of all corals, with the exception of a limited harvest of some soft corals (gorgonians), is prohibited. The Council has also established Habitat Areas of Particular Concern (HAPC) to protect coral and sponge communities, e.g., the Florida Middle Grounds in Florida and the Flower Garden Banks in Texas. The Council also has established a special Coral Scientific and Statistical Committee (SSC) to review new areas that might be designated as HAPCs and recommend rules to govern fishing. The Council is currently proceeding with an amendment to establish new HAPCs at the southern end of Pulley Ridge and on certain deep-water banks in the northern Gulf of Mexico near the Flower Gardens (see attached maps). The HAPC and the essential fish habitat (EFH) programs provide protection to reef resources; however, they do not protect these resources from non-fishing activities, e.g., anchoring by vessels other than fishing vessels, mining, and excavation.

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Deep reef and deep coral are relative terms, and the petition covers a broad spectrum. *Oculina* reefs are in the margin of the photic zone (not the deep-sea), while *Lophelia* and *Madrepora* are found in waters beyond the photic zone. The deep-sea coral formations

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are most typically found on the Continental Slope in the Gulf at depths ranging from approximately 400 to 3,000 feet.

The petition includes eight principal suggested actions to identify and protect the deep-sea coral and sponge habitats. The following is the Council's response to these suggestions.

### **1. Identify, map, and list all known areas containing high concentrations deep-sea coral and sponge habitat.**

The Council agrees that mapping is essential in finding and identifying reef resources, and we support increased efforts. Current and recent work over the past three years in the Gulf includes:

- Mapping the HAPC area of the Florida Middle Grounds
- Mapping Pulley Ridge
- Mapping the Madison-Swanson and Steamboat Lumps Marine Reserves and surrounding areas
- Additional exploratory work in the northern Gulf that contain high topographic structures.

Mapping programs have been conducted by academic institutions, the United States Geodetic Survey (USGS), Minerals Management Service (MMS), and the National Oceanic and Atmospheric Administration (NOAA). The challenge is to use a consistent scale and terminology. Maps created with seismic tools are excellent in describing the bottom profile, depth, and bottom type (rock, sand, etc). The benthic communities must be examined with video, photography, or submersible observations. A seismic chart is one element of the effort in understanding the biological habitat; however, guessing what biological resources are in an area based on seismic data is risky.

There are numerous deep-sea coral and sponge communities along the west Florida shelf and northern Gulf of Mexico. Recent expeditions (summer of 2004) found *Lophelia* in several

locations. A comprehensive mapping project of the entire area would require a major effort, and support to initiate such work is important, especially funding. As stated, the Council supports comprehensive mapping; however, this will require a long-term effort to complete.

A strategic plan to protect the resources might include the systematic mapping and remotely-controlled vehicle (ROV) reconnaissance of high topographic areas. Based on findings, the high concentration reef areas could be designated as no trawling HAPCs.

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**2. Designate all known areas containing high concentrations of deep-sea coral and sponge habitat both as essential fish habitat (EFH) and HAPC, and close HAPC to bottom trawling.**

Coral reefs provide important habitat and support economic activities and should be protected from destructive activities. The Council's HAPC program is proceeding to designate and manage reef habitat. The existence of *Lophelia pertusa* appears to be related to topographic relief (rocky topographic relief) and chemical seeps. It is probable that when these conditions are present, *Lophelia* will be found. Mapping will help to define these areas.

In the Council's area of jurisdiction, bottom trawling is prohibited in the Florida Middle Grounds (FMG) and Flower Garden Banks HAPCs. The flora and fauna of the FMG was examined in 2003, and the observations were consistent with 1975 observations, i.e., this area has high concentrations of coral and sponges and evidence suggests that HAPCs with anti-trawling rules protect these benthic resources. The same conclusions have been made for the Flower Garden Banks HAPC by the Flower Garden Banks National Marine Sanctuary Office.

A HAPC designation will be provided for the hard-coral portion of Pulley Ridge through an amendment that is currently under development to protect coral. The northern areas of Pulley Ridge (latitude of Charlott Harbor, 40') are lower in relief and are octocoral-sponge dominated. The Council is also considering creating no trawling HAPCs in the western Gulf off of Texas and Louisiana in areas identified as Stetson, McGrail, Bright, Geyer, Sonnier, and Claypile Banks and potentially other areas. These are deep banks with coral reef resources. They have been impacted by various activities including fishing, anchoring, archeological excavation, and oil and gas exploration. The proposal to designate these areas as HAPCs has been endorsed by the Council's Special Coral SSC. Other high profile areas such as the Madison-Swanson Marine Reserve may also be considered as a potential HAPC based on recently-completed mapping and studies of benthos in this area. It should be noted, however, that the Magnuson-Stevens Fishery Conservation and Management Act (M-SFCMA) only

provides the Council with authority to manage fishing activities to protect deep-sea coral resources and cannot protect resources from injuries from non-fishing activities including anchoring of merchant vessels, petroleum exploration and production, and archeological excavating.

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**3. Identify all areas not fished within the past three years with bottom-tending mobile fishing gear, and close such areas to bottom trawling.**

Non-trawled areas between 120 to 1,000 meters (394 to 3,281 feet) should be identified and investigated for coral reef resources. If they do indeed have corals and sponges, the Shrimp FMP could be amended to prohibit bottom-trawling or the area could be designated as a HAPC with similar protective measures. Mapping will eventually provide the information to make such a determination. The vast majority of bottom trawling in the Gulf is for penaeid shrimp which occurs in waters less than 300 feet. The royal red shrimp fishery is the only trawling activity in the area of interest (approximately 400 to 3,000 feet), and it is limited to approximately 9 vessels operating in a relatively small portion of the Gulf of Mexico. As previously stated, the Council is in the process of developing an amendment prohibiting trawling, traps, and anchoring on coral habitat in the Gulf exclusive economic zone (EEZ) and protecting coral areas under its EFH program.

**4. & 5. Monitor bycatch to identify areas of deep-sea coral and sponge habitat that are being currently fished, establish appropriate limits or caps on bycatch of deep-sea coral and sponge habitat, and immediately close to bottom trawling areas where these limits or caps are reached until such time as the areas can be mapped, identified as EFH and HAPC, and permanently protected. Establish a program to identify new areas containing high concentrations of deep-sea coral and sponge habitat through bycatch monitoring, surveys, and other methods, designate these newly discovered areas as EFH and HAPC, and close them to bottom trawling.**

The Coral and Coral Reef FMP requires that the fishing vessel return coral bycatch to the sea as soon as possible, and harvest is prohibited. An amendment to the Shrimp FMP is currently under development to improve bycatch monitoring and reporting. The preferred alternative is to use observers to identify the amount and type of bycatch, including deep-sea corals and sponges. This may help to identify deep-sea coral reef habitat.

The Council recommends that NMFS initiate a pilot observer program to monitor bycatch in the Royal Red Shrimp Fishery to evaluate the potential bycatch of deep-sea coral. If deep-sea coral bycatch exists, the Council intends to take appropriate steps to protect deep-sea coral resources. See comments to Oceana's suggested Actions 2 and 3.

A portion of the recommendation under Suggested Action 5 would identify new areas containing high concentrations of deep-sea coral and sponge through bycatch monitoring. This may be a more economical approach in the Gulf due to the limited amount of bottom trawling that is occurring in the area in question (9 vessels in the royal red shrimp fishery) than additional mapping efforts and should be considered.

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**6. Enhance monitoring infrastructure, including observer coverage, vessel monitoring systems, and electronic log books for vessels fishing in areas where they might encounter high concentrations of deep-sea coral and sponge habitat (including encountering HAPC).**

The Council is developing Amendments 13 and 14 to the Shrimp FMP that contain alternatives to require observers, electronic log books, and vessel monitoring systems (VMS) in the Royal Red Shrimp Fishery. Deep-sea corals will be identified through these requirements if they are within the bycatch.

**7. Increased enforcement and penalties to prevent deliberate destruction of deep-sea coral and sponge habitat and illegal fishing in already closed areas.**

The Council is not an enforcement agency; however, the Council is developing Amendment 14 to the Shrimp FMP that contains alternatives to require VMS, in the Royal Red Shrimp Fishery which will provide information that should enhance enforcement and compliance among fishers.

**8. Fund and initiate research to identify, protect, and restore damaged deep-sea coral and sponge habitat.**

Recent funding to the Council has supported some monitoring and mapping in areas such as the Florida Middle Grounds and Madison-Swanson Marine Reserve, and surrounding areas with NOAA/USGS support work in the offshore banks in the northern Gulf. The Council supports additional funding to continue and expand monitoring and research of coral reef habitat in the Gulf of Mexico to identify areas in need of protection from bottom trawling.

It is currently very difficult, if not impossible, to restore a heavily-damaged reef in deep water. There have been successes, in a limited way, to restore or stabilize shallow reefs. Actions include coral transplanting, rebuilding topographic structure, and removing rubble debris. This work is labor intensive with divers doing all of the work. In a decadal time-frame, the community that develops on the new structure has characteristics that are approaching that of a natural reef. In a deep-sea setting, construction must be done with ROVs and submersibles and would be very costly. For example, to transplant 700 corals on a project off Broward County, Florida takes 2 to 3 weeks depending on the weather. A hypothetical project in 500 to 1,000 feet would require much more time. In the United Kingdom and Norway, damaged *Lophelia pertusa* reefs have been documented, but there is no plan to try and restore them. It may be possible to seed areas with viable branches and expect them to grow into the framework of a dense *Lophelia* reef. This prospect is worth further research and investigation.

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Sponge restoration has been tried with marginal success for *Xestospongia muta* off the east coast. David Gilliam (NOVA) and others tried to attach pieces of sponge to the bottom with mechanical devices but found the pieces would not reattach. Other types of sponge can be stuffed into a crevice and they will survive and prosper. Other areas of possible fruitful investigation for restoration feasibility include the degree to which larval supply can be enhanced to increase recruitment and the use of substrate attractants or special substrates types to enhance recruit settlement.

In summary, the Council believes that we are doing everything in the Gulf that is possible with available resources to identify and protect deep-sea coral resources from impacts associated with the use of bottom impacting gear. Furthermore, we believe that any impacts that may be occurring are minimal. We respectfully request that you consider these comments and use them as you see fit in responding to Oceana's petition. Thank you for the opportunity to provide these comments.

Sincerely,

Bobbi Walker  
Chairman

BW:RL:kc

c: Council  
Technical Staff

The information in this letter was obtained from the following:

Program abstracts of the First International Symposium on deep sea corals, 30 July, 3 August, Dalhousie University, Halifax Nova Scotia, Canada. 50 pp.

Proceedings of the First International Symposium on Deep-Sea Corals Edited by Willison, Hall, Gass, Kenchington, Butler, Doherty. 2001. Ecology Action Center, Halifax, Nova Scotia, Canada. 231 pp.

Program abstracts of the Second International Symposium on Deep-sea corals, 8-13 September, 2003. Friedrich Alexander University, Erlangen, Germany. 109 pp.

Stephen D. Carins, 2000. A revision of the shallow-water azooxanthellate Scleractinia of the western Atlantic. Studies on the natural history of the Caribbean region. Vol. 75. 210 pp.

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